

# Deforolimus

Catalog No: **tcsc0122**



## Available Sizes

**Size:** 10mg

**Size:** 50mg



## Specifications

**CAS No:**

572924-54-0

**Formula:**

$C_{53}H_{84}NO_{14}P$

**Pathway:**

PI3K/Akt/mTOR

**Target:**

mTOR

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 44$  mg/mL (44.44 mM)

**Alternative Names:**

AP23573;MK-8669;Ridaforolimus

**Observed Molecular Weight:**

990.21

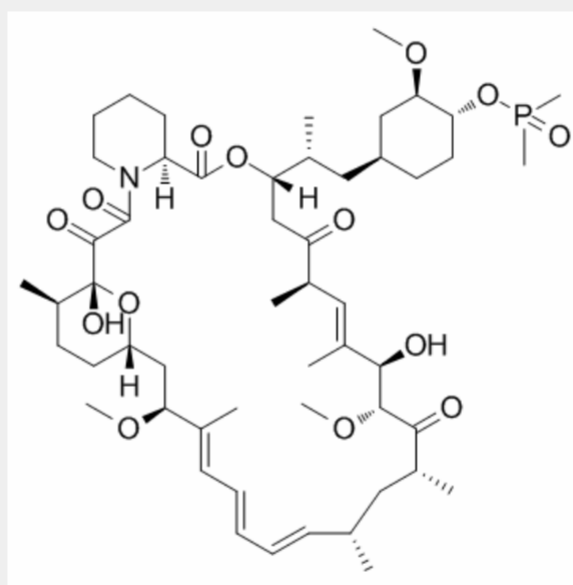
## Product Description

Deforolimus (AP23573; MK-8669) is a potent and selective **mTOR** inhibitor; inhibits S6 phosphorylation with an **IC<sub>50</sub>** of 0.2 nM in HT-1080 cells.

IC50 & Target: IC50: 0.5 nM (HT-1080 cells)<sup>[1]</sup>

**In Vitro:** Treatment of HT-1080 fibrosarcoma cells with deforolimus results in a dose-dependent inhibition of phosphorylation of both S6 and 4E-BP1, with IC<sub>50</sub>s of 0.2 and 5.6 nM, respectively, and EC<sub>50</sub>s of 0.2 and 1.0 nM, respectively. In HT-1080 cells, the EC<sub>50</sub> for inhibition of cell proliferation (0.5 nM) is similar to the EC<sub>50</sub>s for inhibition of S6 and 4E-BP1 phosphorylation. Exposure to deforolimus reduces the proliferation of cell lines representing a variety of tumor types. Administration of deforolimus to tumor cells *in vitro* elicit dose-dependent inhibition of mTOR activity with concomitant effects on cell growth and division. Deforolimus exhibits a predominantly cytostatic mode of action, consistent with the findings for other mTOR inhibitors. Potent inhibitory effects on vascular endothelial growth factor secretion, endothelial cell growth, and glucose metabolism<sup>[1]</sup>.

**In Vivo:** Deforolimus inhibits tumor growth in mice bearing PC-3 (prostate), HCT-116 (colon), MCF7 (breast), PANC-1 (pancreas), or A549 (lung) xenografts. Deforolimus inhibits tumor growth in a dose-dependent manner, with 0.3 mg/kg being the lowest dose that inhibits tumor growth significantly and 3 and 10 mg/kg doses achieving maximum inhibition<sup>[1]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!